Student Level Data Systems
DESE's Plans for the Future
MOSIS

http://dese.mo.gov/MOSIS/
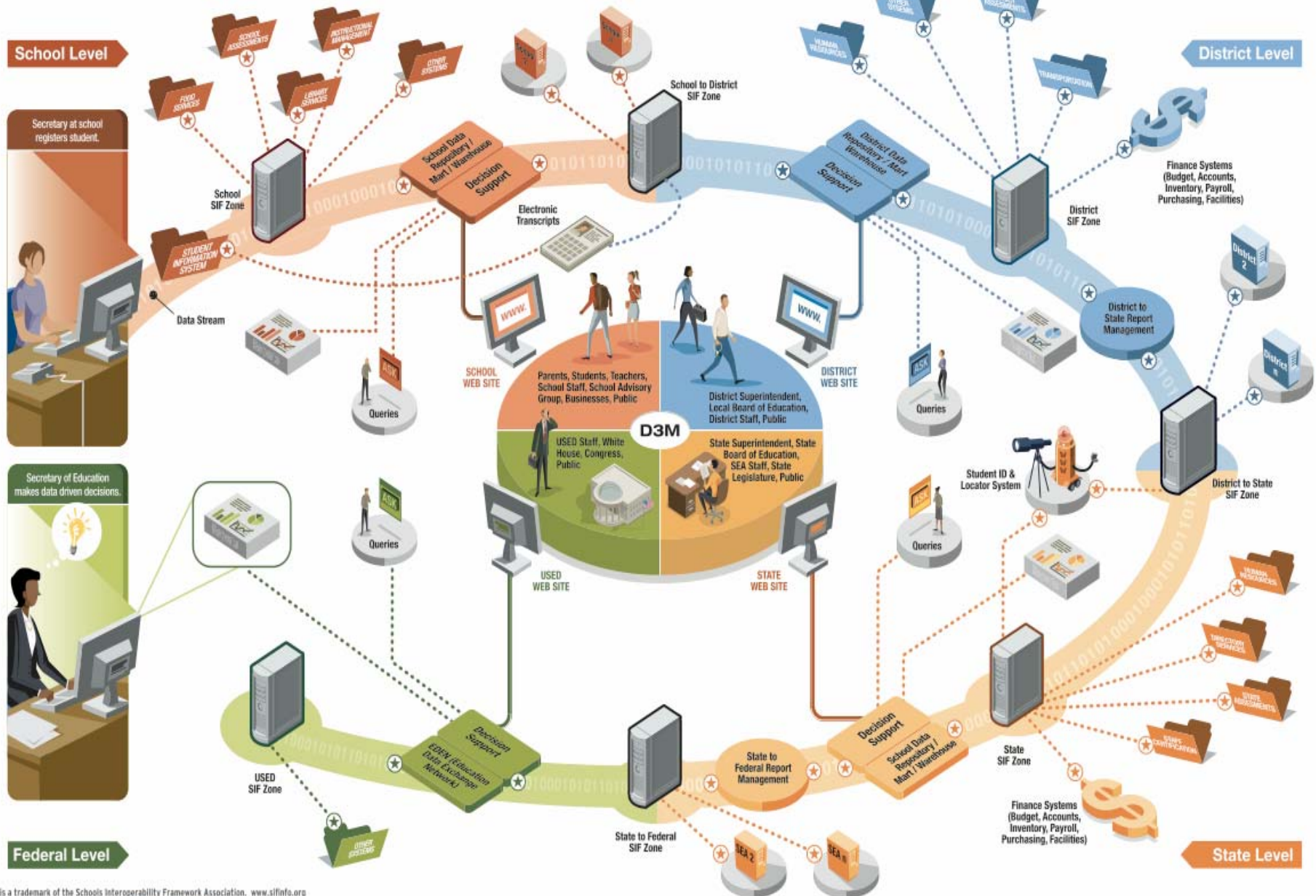
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Secretary to Secretary: The Path from Data to Decisions

From a keystroke at a school to a stakeholder's decision, a network of software applications supports data driven decision making (D3M). Linking software applications for data sharing is the role of technology standards such as SIF™ (Schools Interoperability Framework). System interoperability, as illustrated here, reduces the burden on school staff, strengthens data quality, and improves timeliness of data collection/reporting efforts.
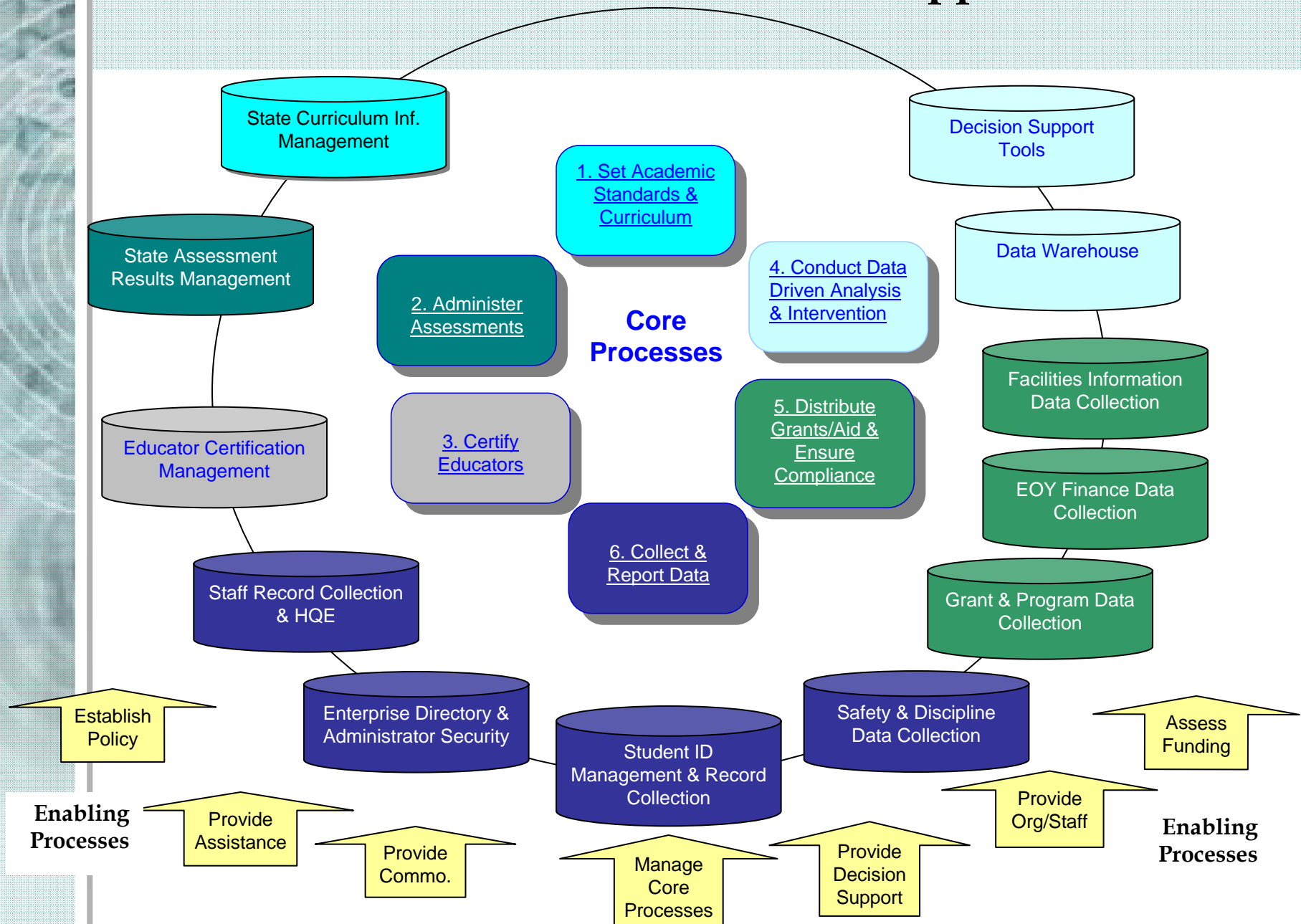
★ Agent enables connectivity.

ESP Solutions Group

School Level

Secretary at school registers student.

School SIF Zone

Data Stream

FOOD SERVICES

STUDENT INFORMATION SYSTEM

SCHOOL ASSESSMENTS

INSTRUCTIONAL MANAGEMENT

LIBRARY SERVICES

OTHER SYSTEMS

School Data Repository / Mart / Warehouse — Decision Support

School to District SIF Zone

Electronic Transcripts

Queries

SCHOOL WEB SITE

Parents, Students, Teachers, School Staff, School Advisory Group, Businesses, Public

DISTRICT WEB SITE

District Superintendent, Local Board of Education, District Staff, Public

D3M

USED Staff, White House, Congress, Public

State Superintendent, State Board of Education, SEA Staff, State Legislature, Public

USED WEB SITE

STATE WEB SITE

District Level

OTHER SYSTEMS

DISTRICT ASSESSMENTS

HUMAN RESOURCES

TRANSPORTATION

District Data Repository / Mart / Warehouse — Decision Support

District SIF Zone

Finance Systems (Budget, Accounts, Inventory, Payroll, Purchasing, Facilities)

District 2

District N

District to State Report Management

Queries

District to State SIF Zone

Student ID & Locator System

Queries

Secretary of Education makes data driven decisions.

Federal Level

USED SIF Zone

OTHER SYSTEMS

Decision Support — EDEN (Education Data Exchange Network)

State to Federal Report Management

State to Federal SIF Zone

SEA 2

SEA N

Decision Support — State Data Repository / Mart / Warehouse

State SIF Zone

HUMAN RESOURCES

DIRECTORY SERVICES

STATE ASSESSMENTS

STAFF CERTIFICATION

Finance Systems (Budget, Accounts, Inventory, Payroll, Purchasing, Facilities)

State Level

SIF is a trademark of the Schools Interoperability Framework Association. www.sifinfo.org

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Architecture for Decision Support

Core Processes

State Curriculum Inf. Management

Decision Support Tools

1. Set Academic Standards & Curriculum

State Assessment Results Management

2. Administer Assessments

4. Conduct Data Driven Analysis & Intervention

Data Warehouse

Educator Certification Management

3. Certify Educators

5. Distribute Grants/Aid & Ensure Compliance

Facilities Information Data Collection

EOY Finance Data Collection

6. Collect & Report Data

Staff Record Collection & HQE

Grant & Program Data Collection

Enterprise Directory & Administrator Security

Safety & Discipline Data Collection

Establish Policy

Student ID Management & Record Collection

Assess Funding

Enabling Processes

Provide Assistance

Provide Org/Staff

Enabling Processes

Provide Commo.

Manage Core Processes

Provide Decision Support

Source: Decision Support Architecture Consortium (DSAC): Chief Council of State School Officers (CCSSO)

DSAC – Key Recommendations

Key Recommendations:

- **Integrated Instructional System** - Implement an integrated system for standards based curriculum, formative assessment and data driven decision making.

- **Curriculum** – Complete the development of a statewide model curriculum that is one hundred percent (100%) aligned to Show-Me Standards. Make this available via the Web for use in all LEAs and schools.

- **Standards Catalogue** – Ensure a well developed cataloging system for the Show-Me Standards that is maintained online.

- **Student Identifier** – A unique student identifier and a single entry student record system should be implemented as soon as possible to bring together data for decision support.

- **Teacher Certification** – Missouri should implement a comprehensive, integrated, online teacher certification program with individual teacher, LEA, and higher education interface capabilities.

- **Balanced Scorecard and Project Management Office** - A balanced scorecard process should be implemented to define and report on the key DESE goals, objectives, measures, and targets. A clearly defined set of projects and budgets should flow from this balanced scorecard. A project management process should be implemented within DESE for all major projects to follow (both technical and non-technical projects).

- **Student Information System (SIS)** –DESE should provide leadership to LEAs in the selection of a Student Information System (SIS) (or systems) that LEAs would be required to use as they replace their SIS or as they implement an SIS for the first time.

- **Data Warehouse and Student-level Data** – DESE should continue its efforts to build a robust data warehouse with reporting tools to house information such as financial, teacher, assessment, special education, and other program data that can be used to fundamentally drive student performance decisions at the classroom and student level.

DATA ELEMENTS

- STATE ID
- MAP "Pre-Coding"
- Student "Core"
- Additional Modules
- Curriculum / Assessment Data
  - Grade Level Expectations (GLEs)
  - New Achievement Levels and grades assessed
  - New Assessments

Data Elements – State ID System

15 Data Items extracted from Local student management systems OR entered in on-line

- Current School Code
- Resident District Code
- Legal Last Name
- Legal First Name
- Legal Middle Name (optional)
- Legal Name Suffix (optional)
- Gender
- Date of Birth
- Current Grade Level
- Local Student ID
- Social Security Number (optional)
- Race/Ethnicity
- State ID
- Current District Code
- Current School Year

Data Elements – "MAP Pre-Code"

34 total data items (includes 15 from ID system) extracted from Local student management systems with the ability to edit on-line.

- Individual Education Plan (IEP)
- Individual Accommodation Plan (IAP) 504
- Gifted
- Migrant
- Title I
- In Building Less than a Year (Full Academic Year Status)
- In District Less than a Year (Full Academic Year Status)
- SES (Free or Reduced-Price Lunch Status)
- H.S. Career Education Student
- Voluntary Transfer Student
- School of Residence ID
- Special Education Instructional Time
- IEP Disability Diagnosis
- Name of Teacher
- MAP-Alternate
- ELL <1Yr in USA
- ELL <3 Yrs in USA
- ELL Monitoring
- ELL (Receiving Services)

Data Elements – Student "Core"

Next Phase is to review the data elements within the Core Data collection system and other potential student level data items

CORE Data

- Screen 02 -- District Data (August Cycle)
- Screen 03 -- District Contact Personnel (August Cycle)
- Screen 04 -- District Directory (August Cycle)
- Screen 06 -- District Tax Data (August Cycle)
- Screen 07 -- Library Media Center (June Cycle)
- **Screen 08 -- Attendance Center (August & February Cycles)**
- **Screen 09 -- Discipline Incidents (June Cycle)**
- Screen 10/10A -- School Calendar (August & June Cycles)
- **Screen 11 -- Special Education Placement Counts by Age (December Cycle)**
- **Screen 12 -- Special Education Exiter Counts by Age (June Cycle)**
- **Screen 13 -- Secondary Headcount (June Cycle)**
- **Screen 14 -- Attendance (June Cycle)**
- **Screen 14A -- Resident II Attendance (June Cycle)**
- **Screen 14B -- Resident II Grade Point Average (June Cycle)**
- **Screen 15 -- Home School/Free and Reduced Lunch (February Cycle)**
- **Screen 16 -- Enrollment, Membership and Summer School (Aug., Oct., & Feb. Cycles)**
- **Screen 17 -- Physical Fitness Assessment (June Cycle)**
- Screen 18 -- Educator Data (October Cycle)
- Screen 19 -- Professional Development (June Cycle)
- **Screen 20 -- Course and Assignment Data (October Cycle)**
- Screen 21 -- Educator Vacancy (October Cycle)
- **Screen 22 -- Sending School Courses and Enrollment (October Cycle)**
- **Screen 24 -- Summer School Courses and Enrollment (June Cycle)**
- **Screen 26 -- Career Education Follow-Up (February Cycle)**
- **Screen 27 -- Career Education Follow-Up - Sending School (February Cycle)**
- **Screen 29 -- Post Secondary Adult Follow-Up (February Cycle)**
- Screen 30 -- District Level Census of Technology (April Cycle)
- Screen 31 -- Building Level Census of Technology (April Cycle)

Data Elements – Student "Core"

Some **Questions about the Student Core**

- How to handle the Attendance Data?
    - Missouri is unique in that we collect data by hours of attendance. Possibly collect the total number of hours attended and the total number of hours absent for a student – two data elements.

- How to handle Course and Assignment Data?
    - Where students and educators cross.

- When to submit, still cycle based?
    - Submit the student record and the department only use the data for that submission cycle.

- How to handle changes to the data?
    - "Certified" data elements at the time of submission, allow corrections via another mechanism.

- "Claiming a Student"

Data Elements – Additional "Modules"

- Migrant Students
- IEP
- Student Organizations

Missouri Student Information System (MOSIS)

- ## ID Component
  - › Over 960,000 IDs assigned
  - › All school districts participating
  - › Work has been done with Higher Education to incorporate the MOSIS ID at the Post-Secondary Level

- ## Pre-Code Component
  - › 441 school districts participated
  - › Over 700,000 students submitted

- ## Next Component?
  - › Student "Core Record" – data within Core Data
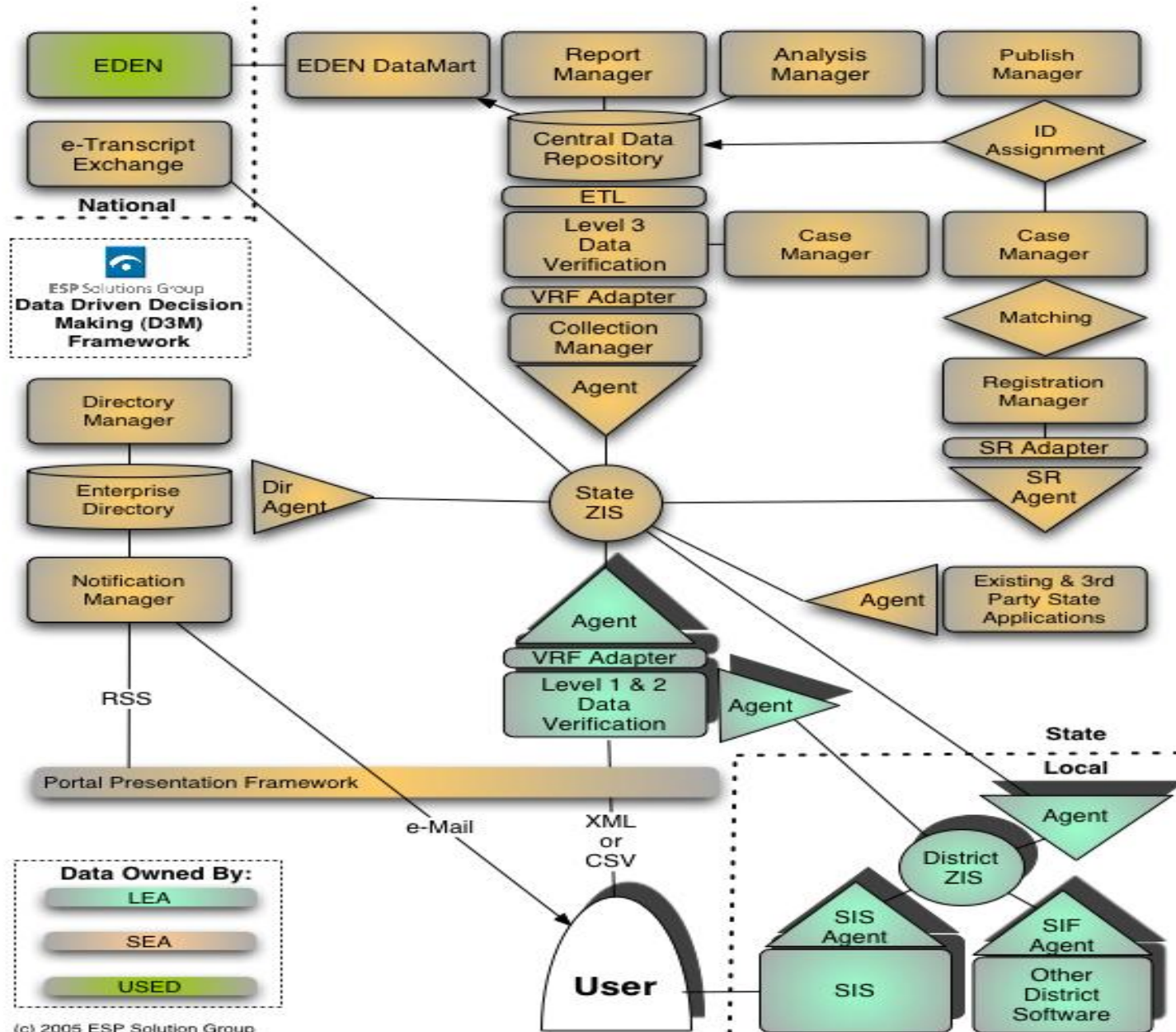
System Components

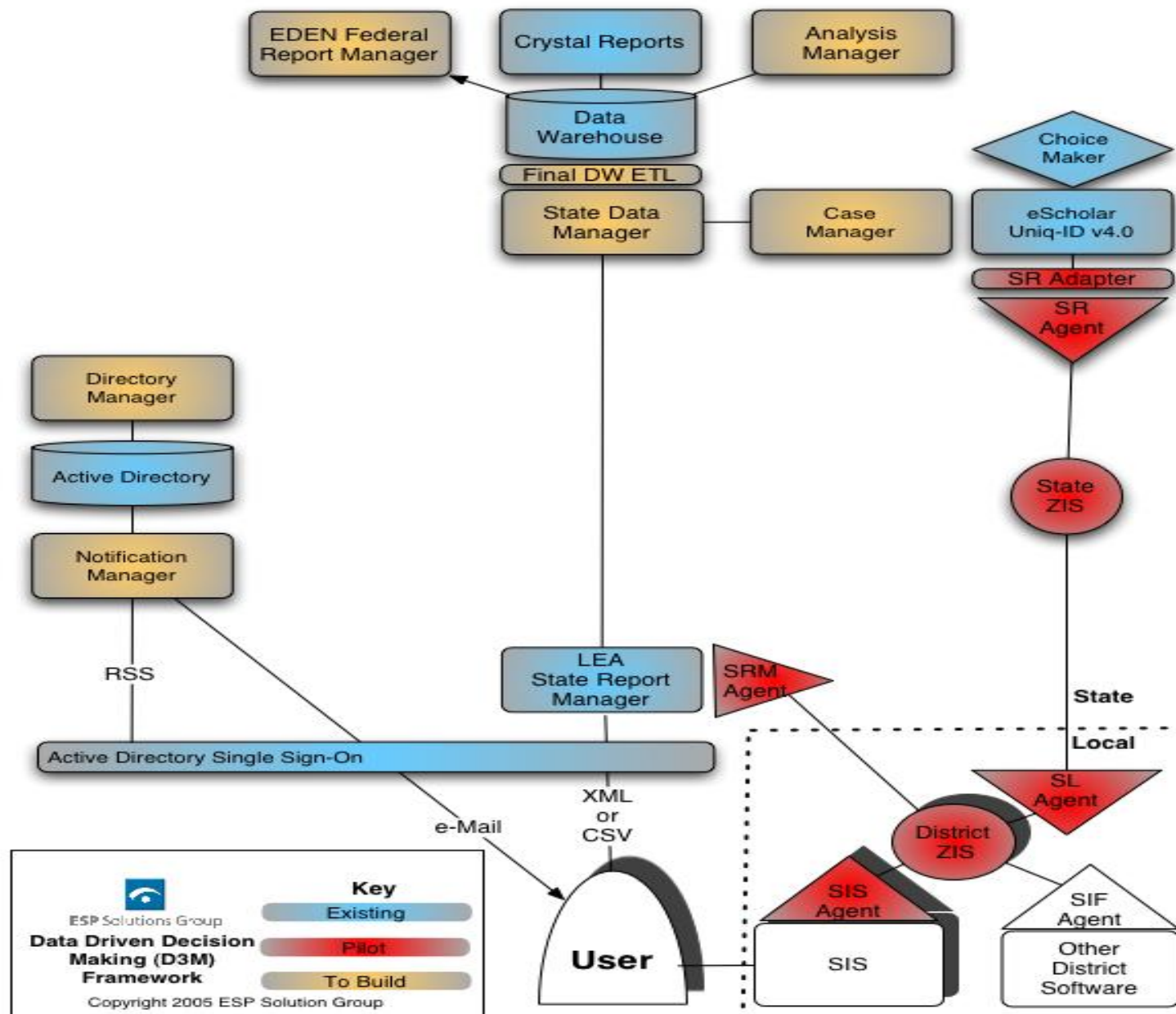Single Sign-On

Data Collection

Data Quality

Data Warehouse

Data Reporting

Generic – D3M Framework

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Missouri – DRAFT Version

Summary of a Potential Time Line

PHASES	STARTED	STATUS	NOTES
MOSIS -- State ID	June 2005	On-going	All school districts participating
MOSIS – Pre-code	October 2005	Closed January 2006	443 school districts participating
MOSIS – "Student Core"	Planning January 2006	Define the student level elements Share with school districts and vendors – by June 2006 "Pilot" collection during the 2006-07 school year "Production" during the 2007-08 school year	
Crystal Reports Ad-hoc Query	Testing February 2006	Turned on by August 2006	All districts with access to ad-hoc query with the MAP data and potential other data sources (BLISS)
GLE data base	October 2005	Available for querying sometime Spring 2006	GLE elements will be linked to the MAP IBD reports